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Artificial subjects and the problem of universal subjectness

Humanity, by developing technologies and merging the real and virtual into a single entity, has taken a step towards the potential emergence of artificial subjects in the future. Among their forerunners today are ChatGPT and other large language models (LLM and neural networks) (Wikipedia contributors, 2023), and in perspective fully-fledged Artificial Intelligences (AI). Neural networks are already capable of significantly improving and adding efficiency to many spheres of human activity. ChatGPT stands for Chat Generative Pre-trained Transformer and is built on the architecture of artificial neural networks (Wikipedia contributors, 2023), or in modern simpler terms, AI.

Thus, the integration of neural networks (AI) in mass and individual learning has the potential to radically increase their effectiveness, because generative language models can fill almost any necessary roles, mechanisms, and educational resources in the educational process and everyday life: for example, in the form of an individual assistant (tutor) with virtually unlimited knowledge, or an entire team to teach team interaction, or a hypothetical social network for interaction and development among both subjects and artificial subjects (AI). AI in education will likely be able to provide as much attention and learning resources to each participant in the educational process as they need to achieve learning goals. This eliminates a significant number of classic factors of the quality of education, and the motivation and abilities of students will play the first roles.

The appearance of artificial subjects, with pre-designed parameters, will change humanity and its life so much that it is very difficult, or even impossible, to predict these specific consequences from today. But potentially, artificial subjects from the level of tools and assistants will grow in human interactions to the level of partners, if not more.

Artificial subject (AS) is an artificially created subject formation (individual or group, community) that meets the criteria of subjectness (thus, an artificial subject formation can be a subject from the point of view of psychology, but not be a subject rights, etc., and vice versa). Also, an artificial subject is an artificially created individual or group, a community that is active under the influence of its own intelligence.

Accordingly, artificial subjectness is the acquisition by an artificial subject of independence, self-awareness, uniqueness and self-sufficiency, readiness to make complex decisions and act, etc. (Smulson, & Meshcheriakov, 2021), and in general, to meet the defined criteria of subjectness.

Historically, the conceptual apparatus of subjectness concerned only people and the personality, but with the advent of new technologies, we must strive for the universality of scientific concepts and definitions.

In this regard, we propose universal criteria for psychological subjectness that are suitable not only for humans, but also for assessing AI, neural networks, and artificial subjects. According to our concepts of subjectness and subjectness activity

(Meshcheriakov, 2023; Smulson & Meshcheriakov, 2021; Smulson et al., 2021), the main criteria for the presence of subjectness are:

1. The presence of consciousness and self-awareness.
2. The presence of uniqueness and individuality.
3. Self-design (Chepelieva, 2019), hierarchization, and organization of internal and external resources and processes (mechanisms) for one's own needs, ideas, goals (designing).
4. Awareness, formation, and transformation of ideas (projects) and the mental model of the world (or its analogs).
5. The presence of conscious free will and awareness of one's own activity, independent initiative.
6. The presence of independent goal-setting, designing, and achieving tasks.
7. Conscious management (disposition) of oneself, one's own activity, and actions.
8. The presence, awareness, and acceptance of one's own responsibility.
9. The exercise of subjectness activity and purposeful influence on the environment.

It should be noted that a necessary condition for universal psychological subjectness is compliance with all criteria of subjectness at the same time, and not only certain of them.

The discussion itself (and the potential emergence) of artificial subjects (AS) is seen by us as an important achievement in the design of the development of subjectness in virtual spaces, as it is unlikely that a physical artificial subject will be created before a virtual one. This will prove that humanity has not only learned to successfully design (project) (Smulson, Meshcheriakov, Nazar, Ditiuk, 2023) and develop subjectness but also to artificially reproduce it.

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